California Department of Food & Agriculture

Minutes
of the Joint Meeting of the Pierce's Disease/Glassy-winged Sharpshooter Board
and Pierce's Disease Advisory Task Force
Held on October 12, 2006
CDFA Auditorium
1220 N Street, Sacramento, CA 95814

PD/GWSS BOARD

Members Present

Kevin Andrew	Edgar "Pete" Downs	Steve McIntyre
Dennis Atkinson	Dana Merrill	Jim Unti

Members Absent

Greg Coleman	Bradford Lange	Paul Wulf (resigned day
Ben Drake	Frank Leeds	of meeting via email)
Hugh (Wally) Ewart	Al Rossini	
Drew Johnson	Herb Schmidt	

PD ADVISORY TASK FORCE

Members Present

Kevin Andrew	Nancy Irelan	Rick Roush
Larry Bezark	Joe MacIlvaine	Judy Stewart-Leslie
David House	Steve Nation	Beth Stone-Smith
Scott Hudson	Corky Roche	

Members Absent

Ted Batkin	John Snyder	Craig Weaver
Ben Drake	Kim Waddell	Dave Whitmer
Drew Johnson	Richard Mounts	
Steven Pavich	Robert Wample	

OTHER ATTENDEES

Alan Bennett	Janet LeMasters	Karen Ross
Jeff Erwin	David Morgan	Nicole Stivers
Tom Esser	Greg Morris	Andy Walker
Mike Falasco	Kari Morrow	Bob Wynn
Ken Freeze	Stacie Oswalt	A.J. Yates
Craig Hanes	Rick Redak	
Bruce Kirkpatrick	Ted Rieger	

CALL TO ORDER

Board Chairman Pete Downs and Advisory Task Force (ATF) Acting Chair Corky Roche called the meeting to order at 10:05 am.

Prior to the start of the meeting, Ken Freeze of Brown-Miller, Inc. presented to Undersecretary A.J. Yates the Silver Anvil Award in Public Relations that Brown-Miller, Inc. (B-M) received in June 2006 for the CDFA PD/GWSS Outreach Program. Ken explained that this award in the public relations industry is the equivalent to the Academy Awards. A.J. accepted the award on behalf of Secretary Kawamura. A.J. thanked Ken and B-M and the PD/GWSS Board and PD Advisory Task Force for all their great work and successes in combating Pierce's disease and the glassy-winged sharpshooter. A.J. would present it to the Secretary on behalf of Ken Freeze.

ROLL CALL AND INTRODUCTIONS

Bob Wynn conducted the roll call for the PD/GWSS Board and the PD Advisory Task Force. A quorum was present for the PD Advisory Task Force but not for the PD/GWSS Board. Self-introductions followed for members and guests.

PUBLIC COMMENT

None.

WELCOME AND OPENING REMARKS

Pete Downs welcomed everyone to the meeting and introduced Undersecretary A.J. Yates. The Undersecretary addressed the members and guests.

Undersecretary Yates thanked Bob Wynn for all the great work he has done in the Pierce's Disease Control Program (PDCP), and thanked the Board and ATF members for all their dedication and hard work. He spoke on the many issues facing the Plant Health Division for the past year. A lot of pressure has been on this Division due to increased detections of exotic pests throughout the year that had a huge impact on trade for numerous California products. Pests found included peach fruit fly, guava fruit fly, and diaprepes root weevil (San Diego). A.J. commended both Bob and John for all their efforts in eradicating two Medfly infestations in Southern California as well as the peach fruit fly in Fresno. Their use of good detection tools and well-trained staff made a big difference in handling these infestations.

The Undersecretary also discussed the current challenges the Department was facing with the outbreak of *E. coli* (0157: H7) in spinach that had occurred within the last three weeks causing over 200 people to become ill nationwide with three confirmed deaths. The spinach had originated from the Salinas Valley in California. Both CDFA and the Department of Health Services were investigating various sources of contamination where the *E. coli* could have originated. The USDA and FDA were also involved and working with numerous agencies in California. He said it would be an ongoing investigation that included checking the sources of irrigation water, the growing fields, cultural practices of the growers, compost and manure sources, and other products as well as the packing and processing facilities to pinpoint the source of the contamination.

Also, the recent incident of illnesses caused by raw milk consumed by children was from a different strain of *E. coli*. The county health officials and DHS determined early on that it was a unique strain not associated with the spinach and took quick action. It does take an enormous amount of time to get these types of outbreaks resolved. We must promote safety in all facets of food processing and learn from these experiences. This is where the growers and processors must take extra precautions with increased sanitation efforts in the fields, for their employees, and at the processing sites. The USDA developed specific standards and did a great job in putting safeguards in place for processing beef to alleviate the potential contamination of meat and transmission of diseases, i.e. mad cow disease.

Bob Wynn announced that David House (Village Nurseries) was the newest member of the ATF and welcomed him to the meeting. Bob also introduced Larry Bezark as the new Assistant Director in the Plant Health Division as well as the newest members of the PDCP staff. Roger Spencer was appointed as the new Branch Chief, Craig Hanes as Program Supervisor, and Kari Morrow replaced Julie Lindsey who had retired in June.

APPROVAL OF MINUTES

- ❖ It was **M/S/P** by the Advisory Task Force to approve the minutes of the joint PD/GWSS Board and PD Advisory Task Force meeting held in Sacramento on May 16, 2006.

NEXT MEETING

The next meeting is scheduled for Monday, January 22, 2007, at 1:00 p.m. in Sacramento at CDFA in the Auditorium to coincide with the Unified Wine & Grape Symposium being held the same week at the Sacramento Convention Center.

BOARD AND ADVISORY TASK FORCE MEMBERSHIP

See Welcome and Opening Remarks.

RESEARCH PROGRAM REPORT

This agenda item was to cover a report with presentations on the UC / CDFA Research Summit, review the draft RFP and the Plant Pathology Consortium (PPC) proposals. Since there wasn't a quorum present in the morning for the PD/GWSS Board, the PPC discussion was moved to the afternoon.

Tom Esser briefly spoke on the joint 2006 UCD / CDFA Research Summit held at UC Davis in August. This meeting drew together numerous research scientists to report on the results and progress made on projects related to PD/GWSS on various areas of research.

He then introduced the three university researchers who participated and made presentations at the research summit. Both Dr. Andy Walker and Dr. Bruce Kirkpatrick are from UC Davis and Dr. Rick Redak is from UC Riverside. They then provided overviews of their breakout sessions.

Dr. Andy Walker spoke on the topic "Genetics and Interference with *Xf*/PD Acquisition". His discussion covered the research priorities on genetics, overall breeding goal of host resistance via transition and transgenic techniques, classical breeding requiring single gene and multiple gene resistance sources bred into cultivated *vinifera*, characterization of resistance sources, mapping, mark-assisted selection and positional cloning, obtaining resistance genes from grapes and other sources, transforming *vinifera* with genes to interfere with *Xf* infection, and transforming rootstocks to allow transmission of compounds capable of suppressing infection or disease. For conventional genetics, PD resistance mechanisms are unknown, resistance from *arizonica* has been mapped and physically located in preparation for genetic engineering, and mapping of complex resistance is underway. A current goal for PD and *Xf* resistant cultivars is to achieve a three-year seed to seed cycle. The 2006-year crosses will produce 94% *vinifera* progeny with testing currently at 88%--wine making to occur in 2007. Several resistance sources exist and are being introgressed into *vinifera* backgrounds. Under current investments, winegrape breeding totals $145,000 per year; table grapes at $150,000 per year, and new ARS investments in breeding. For transgenic, the public acceptance is unknown, there is opportunity to introduce robust or multiple resistance sources with limited alteration to the *vinifera* parent, low numbers of candidate genes, and transgenic rootstocks are highly desirable but the approach is unclear. This would require assembling of team and periodic sharing of results with stable funding to retain top scientists in the field of genetic research. Dr. Walker's concerns were directed towards funding, finding new resistance sources, and the fact that *Xf* infects and resides in a wide range of species, genera and families. In the areas of research, we need to understand the interactions at the X*f*/plant interface, systemic infection and symptom development. This new knowledge would disrupt infection and spread, aid efforts aimed at genetic solutions and optimize detection. Results should be available in five to seven years. We currently know what the transmission mechanism is by the presence of *Xf* in the insects with their ability to transmit PD. What is not known is how to manipulate vector transmission and the reservoirs for acquisition in host plant biology. Dr. Walker suggested that more research be directed in the areas of identification of pathogenic/virulent strains and cost effective strain identification technology. Priorities should include overwintering in fields and understanding the potential for early season brood to acquire and transmit *Xf*. His recommendation for the 2007 RFP included classical and transgenic in host resistance via breeding and understanding of the transmission of *Xf* and PD and the role of native plant hosts.

Dr. Bruce Kirkpatrick's report was on "Biocontrol of *Xylella"*. He began with some background information. Bacterial species have been isolated from xylem sap extracted from healthy grapevines in Canada and California. The results of his endophyte project have shown about 2% of California strains inhibited growth of *Xylella in vitro* and systemically colonized grapevines using mechanical inoculation. Three years ago, eight of the California strains were inoculated into grapevines later challenged with *Xf* in 2003. Even though none of the California strains prevented initial *Xf* infection, after planting the vines in the field, two of the strains prevented PD from developing in 90 to 100% of the vines. So far the vines remain healthy and *Xf* has not been detected in three years. The results of Dr. Hopkins research show *Xf* strains from elderberry and sycamore caused no PD when inoculated into grapevines. Over a six year period, the strains were used in three field trials with young vines inoculated with the cross protecting strains. They were then planted in field sites with high PD pressure. After four years, vines inoculated with the elderberry strain were all alive and PD symptoms were rated as 1.5 on a 0 – healthy to five – dead scale. All the vines used as controls were dead. Wild type *Xf* could be isolated but at much lower concentrations from elderberry *Xf* protected vines. There are also pros and cons for biocontrol. Pros -- If identified, biocontrol strains could be quickly integrated in grapevine nursery stock, endophytic bacteria should not alter quality or agronomic traits of grapevines; and if a naturally occurring endophyte could be identified, there would be a greater public acceptance of a PD biocontrol agent than a PD resistant transgenic grapevine. Cons – Before 2005, there was no precedent for controlling bacterial vascular diseases using biocontrol agents, biocontrol of *Xf* ranked low by NAS review, some endophytes may not overwinter and continue to protect vines against PD and avirulent protective *Xf* strains might regain pathogencity traits and produced PD.

He also noted that biocontrol using endophytes and avirulent *Xf* has shown sufficient positive results and shouldn't be abandoned. Research is still in the discovery phase with new biocontrol strains that need to be field-tested and also retest the strains that have been already established. Biocontrol agents need to be tested in high disease pressure field sites rather than mechanical inoculation that might overwhelm protective properties of biocontrol agents. We need to understand the basic mechanisms conferring protection by biocontrol agents.

Dr. Kirkpatrick's recommendation for the 2007 RFP included the submission and/or continued support of biocontrol projects using bacteria, bacteriophage and possibly fungi that have showed encouraging preliminary results. His key concerns are not specific to biocontrol. There should be continued funding for high quality "basic" research on how Xylella causes PD in grapevines and better access to objectives of on-going, funded projects and obtain the final results of previously funded projects. Also, learning from unsuccessful projects will let scientists know what avenues have been tried and failed.

Dr. Rick Redak's presentation was on "Biocontrol of GWSS and Monitoring/Diagnostics/Sampling". His research area has covered sampling protocols, plant and disease acquisition and inoculation, and host plant quality that effects insect feeding. Research for monitoring GWSS can now be implemented—trap design, color, and sampling protocols; research also should include how to build better traps and there should be a better understanding of the scientists approach to detecting PD. Researchers currently use PCR and ELISA methods for detecting *Xylella* in plants. The methodology needs to be improved in the areas of monitoring and surveying. We need to question the relevance of some of the GWSS-X*ylella* interaction research relative to solving PD. Dr. Redak noted eight key priority areas for the 2007 RFP. Those items are as follows: 1) design of a pamphlet for trapping and monitoring; 2) work with manufacturer to alter trap design to match research recommendations; 3) understanding the sticky trap numbers; 4) study of GWSS dispersal is needed and location of knowledge gaps; 5) GWSS degree-day is complete; 6) PCR methods need to be faster, quicker, and better in order to detect *Xylella* in GWSS; 7) develop strain-specific diagnostic detection methods in plants and insects; and 8) develop technology that is more cost-effective and quicker with more sensitive diagnostic-pathogen and host markers.

Dr. Redak re-iterated that the research direction would be better served if focused on the controlling, managing and limiting of the PD, and that compelling justification and preliminary data should be required for funding projects.

It was suggested to assemble all the research data, information and reports (i.e. trapping, monitoring, surveying, results of methodology, etc.) together into one document. The actual posting of the reports has to be approved by the authoring research scientist and needs to be reviewed to determine if it warrants publishing or not. Not all of the Summit proceedings are read or reviewed to a large extent and should be compiled into a master database by UC. It was noted that published information and reports on PD/GWSS should be available to all; however, there are problems that can arise from that. It was also recommended that growers need a specific handbook or user guide to assist them in their line of work.

Dr. Redak then went on to his next presentation –" the Biocontrol of GWSS". Great strides have been made on the biological control of GWSS most of which is due to *Gonatacerus ashmeadi*. The 20% parasitism of egg masses each year may add to the future suppression of GWSS in the years to come. The additional releases of other organisms have not shown any increase in the levels of parasitism and there are questions as to the impact these efforts have on reducing GWSS numbers and incidences of PD.

There are six priority areas in biocontrol for the 2007 RFP: 1) under various environmental conditions, the use of natural enemies to suppress PD should be measured; 2) evaluate the efficacy of natural enemies to control GWSS in urban, organic farming, and low pesticide use areas; 3) determine through modeling and life-history analyses within the life cycle of GWSS to determine where biocontrol would be most effective; 4) evaluation of imported, new species of parasitoids should be focused on realistic assessments using models to demonstrate potential for greater impacts on PD than from already established natural; 5) use of conservation biological control strategies to enhance existing parasitoid efficacy should be investigated; and so far the use of bacteria, fungi, and viruses have had very little impact in California and would require successful data results before funding in this specific area.

Dr. Redak noted concerns in the areas of neoclassical biocontrol where the research benefit is unknown using foreign parasitoids, the unknown risk associated with the impact of less specific parasitoids on native leafhoppers in states east of California, and the economic feasibility for mass-rearing and release of parasitoids.

PIPRA UPDATE

Alan Bennett gave an update on PIPRA activities—the intellectual property support contract. A few milestones were achieved in 2005-06. They have continued to develop and maintain the intellectual property structure, the scientific literature database, analyzed trends and research related to Pierce's Disease.

PIPRA will continue to work on updating and maintaining the database that was obtained originally from Dr. Sandy Purcell that contains 2,500 + records (plants, grape varieties, patents, insecticides).

Tom Esser and Alan Bennett would work together on drafting language regarding PIPRA so it can also to be incorporated into the RFP.

RESEARCH DIRECTOR REPORT

The discussion on the Plant Pathogen Consortium proposals by Dr. Nancy Irelan will have to be held at a later date since a quorum was not present for the PD/GWSS Board.

This was Nancy's first report since being appointed to the Research Director position and copies were distributed to members. Nancy noted that she had also attended the two day UC / CDFA Research Summit in order to observe and assess any changes that would be of value and could be incorporated into the RFP prior to its release in November. Key items she wanted to address were gap analysis in research, formation of a Research Scientific Advisory Committee, increase research efforts through federal grants, and activities and meetings that she participated in.

Nancy suggested steps to be taken to proceed forward. This included research gap analysis to identify where specific knowledge gaps, strengths and weaknesses existed in the research arena.

She made a recommendation to create a new independent Research Scientific Advisory Committee (SAC) of 6 to 8 members representing key industry areas with expertise and backgrounds in PD research selected by her with the PD Board members' approval and recommended to the Secretary for appointment. This would be a voluntary, non-funded group of individuals committed and charged with overseeing all the research goals and strategic planning outlined and based on the initial recommendations of the PD Board, NAS, and AVF.

RFP REPORT

Dr. Rick Roush with the UC PD Research Grant Program briefly went over the Working Draft RFP on PD research proposals. The working draft had been provided to only the Board members. This would be a joint RFP request between UC and CDFA and proposals to be considered by both for funding. The timeline to be followed starts with the RFP released on November 6, with proposals due January 16, 2007, the renewal of progress reports in March, award notifications both by CDFA and UC sometime in May, 2007 and a starting date of July 2007.

The new revised version of the RFP contains more in depth descriptions of the key research areas we are looking at. The research and implementations priorities are outlined in the Working Draft – Attachment A. Dr. Rousch felt that Attachment B – Pierce's Disease Research Recommendations was redundant and suggested to instead use Attachment C – Key Recommendations (from the NAS report) so that scientists would focus their attention on what we have defined and expect to be contained in the submitted proposals. These areas included: interactions of host, pathogen, and vector; host plant resistance to pathogen and pest; biological control; vegetation management; chemical control; and economic feasibility.

AREAWIDE PROGRAM OVERVIEW AND UPDATE

Beth Stone-Smith provided an update on the current status of areawide projects in Tulare, Riverside, and Ventura.

Beth and Bob Wynn had attended grower meetings in Kern County in September that included representatives from the state, county, and USDA to discuss the areawide management. Beth said they needed to look at the hot spots and is not getting the same level of efficacy out of the treatments.

APPROVED NURSERY TREATMENT PILOT PROJECT UPDATE

Greg Morris reported that the nursery treatment pilot project continued to operate successfully. Greg reported that there were 51-sleeved shipments with a total of 198 egg masses, 44 parasitized, 35 perished upon emergence, 109 dead, and 10 dead for other reasons. Over the last 15 months, there have been a total of 104 shipments, 495 egg masses, all of them dead. He mentioned that the nurseries have expanded to 40 egg masses per shipment, rather than 10 in 2006. There was a PD/GWSS Nursery Subcommittee scheduled in Irvine on November 15.

OUTREACH AND EDUCATION UPDATE

Ken Freeze provided everyone with copies of the latest draft for the new brochure. The next newsletter would also include the announcement of Dr. Nancy Irelan as the new PD Research Director. He drew everyone's attention to the new PD/GWSS tripod display case set up in the room and asked members to view the PD/GWSS display during the meeting. Ken mentioned that they attended and participated in the ASEV meeting in June; a science fair meeting that draws a large attendance number of growers. B-M would also be setting up a display at the annual Unified Grape Symposium in January 2006. They would be sending out postcards to all growers in the state to invite them to the event. He also discussed the newly developed PD/GWSS Board Interactive Forum website at located at www.pdgwss.net . This website format will help to open up channels of communication dealing with various aspects of PD and GWSS with the vintners, growers, processors, and research scientists. Ken also mentioned that they would be participating in the CAPCA Annual meeting held in Anaheim on November 14.

PIERCE'S DISEASE CONTROL PROGRAM UPDATE

Nursery Update: Greg Morris stated that as of the end of September, there had been more than 56,539 nursery shipments with only 45 problem shipments, 99.92% success rate. Last year, we had over 59,240 shipments with 77 problem shipments at a 99.87% rate. There continues to be problems with the notification part of the program.

Rapid Response Program: Craig Hanes reported on Santa Clara, Solano, Sacramento, Fresno, Tulare and Imperial counties. Santa Clara was down to treating only three areas (Evergreen, Branham, and Blossom Hill). There had been no new finds in Solano County for 2006. Sacramento had a new area at a Lowe's nursery in Elk Grove while treatments were ongoing in Foothill Farms and Rancho Cordova. Fowler in Fresno County was declared eradicated but Kingsberg had become reinfested. Tulare and Imperial were continuing to trap and treat GWSS infested areas.

Biocontrol Update: David Morgan reported on the biocontrol program. They were experiencing lower egg production at this time of year. They were hoping to break the GWSS ovipositional diapause so that they could increase egg production. They are currently working with six species of biocontrol agents. David discussed the various species releases in California, the monitoring protocols and sites (leaf counts, time search, incubations), and the monthly trends from 2002-06. Egg mass densities seemed to be going down. Monitoring data included parasitism rates and species by site.

Pierce's Disease Research Symposium and EIR: Tom Esser reported that the 2006 Pierce's Disease Research Symposium was being held this year at a different hotel in San Diego. It would be held at the Westin Horton Plaza Hotel and the deadline for making hotel reservations was October 28. Tom mentioned that they were still looking for guest speakers for the Symposium and that it was suggested that Board and ATF members play a role at the meeting. He also reported that CDFA - PDCP had lost the appeal regarding the EIR lawsuit. There had been meetings with a working group to correct the risk assessment issues regarding pesticides.

FISCAL UPDATE

Bob Wynn quickly reviewed the budget and fiscal updates, as no action was needed. Bob also discussed the recent impromptu meetings in Washington, D.C. that took place in September with Pete Downs, Tom O'Brien and Fowler West. This trip enabled them to have meetings with congressional staff, and the APHIS and OMB staff as well. The OMB viewed the PDCP as no longer being an emergency program for acquisition of CCC funds. The program could face a $5 million shortage if the appropriation stays the same through fiscal year 2008. If it should occur, then we would have to reassess and prioritize facets of the program and cut funding where appropriate. There was still a lot of support for the program back in Washington, DC. All in all, it was a very worthwhile trip.

Another will organized in the early spring of 2007. It was discussed that the Texas PD Program staff as well as their congressional representatives should also be included in these meetings for continued support for funding for both Texas and California. The two state programs also needed to work together to share information and learn from each other so that the work effort and research projects are not duplicated.

Bob also informed the Board and ATF members that Rick Roush would be resigning from the ATF since he was moving back to Australia in November. He thanked Rick for his dedication and serving as a member.

CLOSED EXECUTIVE SESSION PURSUANT TO G.C. SECTION 11126

None.

RECONVENING OF PUBLIC MEETING

None.

OTHER ITEMS

None.

CLOSING COMMENTS AND ADJOURNMENT

Karen Ross wanted to recognize Rick Roush for all the hard and devoted work he had put towards the IPM Program at UC Davis and in representing the Pierce's Disease Advisory Task Force. Rick's departure would be a real loss to the ATF and the wine and grape industry.

Chairman Pete Downs adjourned the Board meeting at 3:50 p.m.